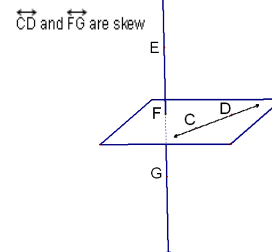
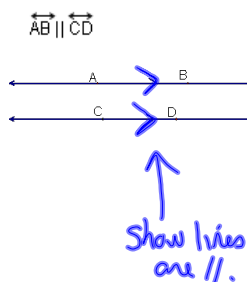


Chapter 3 Parallel and Perpendicular Lines

3-1 Parallel lines and transversals

Parallel lines (\parallel)-coplanar lines that do not intersect

Skew lines -lines that do not intersect and are not coplanar

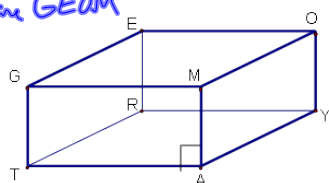


Oct 23-11:34 AM

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Parallel planes-planes that do not intersect

plane $RTAY \parallel$ plane $GEOM$



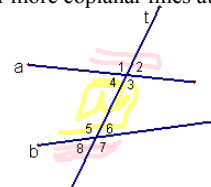
skew
 $\overleftrightarrow{GT} \perp \overleftrightarrow{RY}$

$\overleftrightarrow{GM} \parallel \overleftrightarrow{TA}$
 $\overleftrightarrow{GM} \parallel \overleftrightarrow{RY}$

Transversal--a line that intersects 2 or more coplanar lines at different points

interior angles
 $\angle 3, \angle 4, \angle 5, \angle 6$

exterior angles
 $\angle 1, \angle 2, \angle 7, \angle 8$

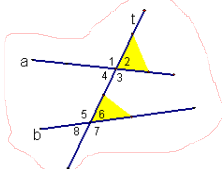


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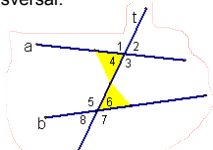
Corresponding Angles-two angles that occupy corresponding positions.

$\angle 2 + \angle 6$
 $\angle 1 + \angle 5$
 $\angle 3 + \angle 7$ $\angle 4 + \angle 8$



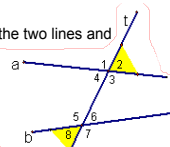
Alternate interior angles-two angles that lie between the two lines and are on opposite sides of the transversal.

$\angle 4 + \angle 6$
 $\angle 3 + \angle 5$



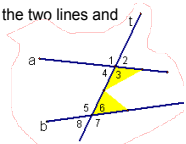
Alternate exterior angles-two angles that are on the outside of the two lines and are on opposite sides of the transversal.

$\angle 2 + \angle 8$
 $\angle 1 + \angle 7$



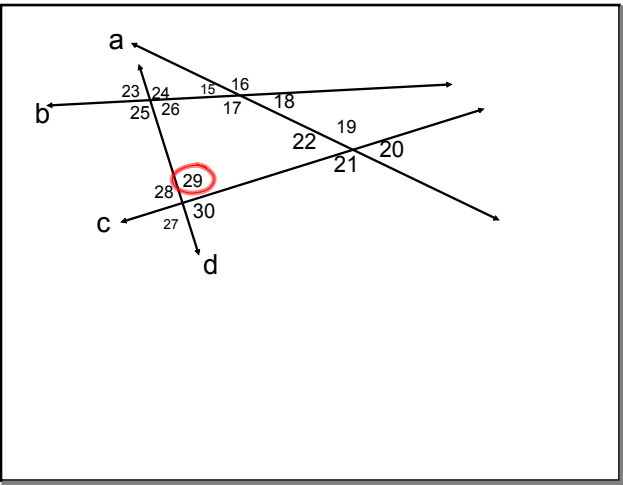
Same-side interior angles-two angles that lie between the two lines and are on the same side of the transversal.

(Consecutive int. angle)
 $\angle 3 + \angle 6$ $\angle 4 + \angle 5$



Oct 23-11:34 AM

Oct 24-10:23 AM



Open books to page 128

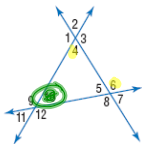
Nov 1-9:46 AM

Oct 23-11:43 AM

2. **FIND THE ERROR** Juanita and Eric are naming alternate interior angles in the figure at the right. One of the angles must be $\angle 4$.

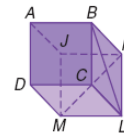
Juanita	Eric
$\angle 4$ and $\angle 9$	$\angle 4$ and $\angle 10$
$\angle 4$ and $\angle 6$	$\angle 4$ and $\angle 5$

Who is correct? Explain your reasoning.



For Exercises 4–6, refer to the figure at the right.

- Name all planes that intersect plane ADM .
- Name all segments that are parallel to \overline{CD} .
- Name all segments that intersect \overline{KL} .

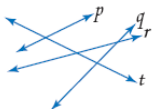


Nov 9-7:10 AM

Nov 9-7:10 AM

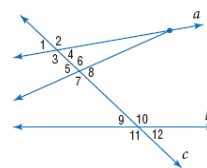
Identify the pairs of lines to which each given line is a transversal.

- p
- r
- q
- t



Identify each pair of angles as alternate interior, alternate exterior, corresponding, or consecutive interior angles.

- $\angle 7$ and $\angle 10$
- $\angle 1$ and $\angle 5$
- $\angle 4$ and $\angle 6$
- $\angle 8$ and $\angle 1$

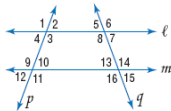


Nov 9-7:10 AM

Nov 9-7:10 AM

Name the transversal that forms each pair of angles. Then identify the special name for the angle pair.

15. $\angle 3$ and $\angle 10$
16. $\angle 2$ and $\angle 12$
17. $\angle 8$ and $\angle 14$



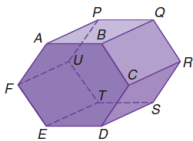
HW
p129-130
22-27, 32-47

Nov 9-7:10 AM

Oct 24-10:25 AM

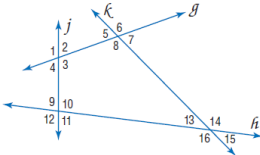
For Exercises 22–27, refer to the figure at the right.

22. Name all segments parallel to \overline{AB} .
23. Name all planes intersecting plane BCR .
24. Name all segments parallel to \overline{TU} .
25. Name all segments skew to \overline{DE} .
26. Name all planes intersecting plane EDS .
27. Name all segments skew to \overline{AP} .



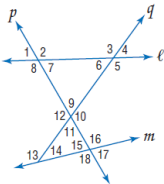
Identify each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior angles*.

32. $\angle 2$ and $\angle 10$ 33. $\angle 1$ and $\angle 11$
34. $\angle 5$ and $\angle 3$ 35. $\angle 6$ and $\angle 14$
36. $\angle 5$ and $\angle 15$ 37. $\angle 11$ and $\angle 13$
38. $\angle 8$ and $\angle 3$ 39. $\angle 9$ and $\angle 4$



Name the transversal that forms each pair of angles. Then identify the special name for the angle pair.

40. $\angle 2$ and $\angle 9$ 41. $\angle 7$ and $\angle 15$
42. $\angle 13$ and $\angle 17$ 43. $\angle 8$ and $\angle 4$
44. $\angle 14$ and $\angle 16$ 45. $\angle 6$ and $\angle 14$
46. $\angle 8$ and $\angle 6$ 47. $\angle 14$ and $\angle 15$



Nov 3-7:13 AM

Nov 3-7:14 AM